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ABSTRACT

This report provides detailed technical information concerning the Preschool Racial Attitude Measure II (PRAM II) a method for assessing the attitudes of pre-literate children toward light- and dark-skinned individuals. Several major changes were involved in the PRAM II revision: (1) the length was doubled, (2) the general artistic quality of the stimulus materials was improved and differential hair color of the figures was removed, and (3) the revised measure can be used to test both sex-role and racial identification. Information provided in the report includes a brief summary and bibliography of studies done using the PRAM I procedure; a description of the PRAM II test materials; descriptions of the subject groups and procedures employed in the 1970-71 standardization study; a summary of the findings of this study; and some general comments on the current status of the PRAM II procedure. Appendixes included. (Author/AJ)

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PRESCHOOL RACIAL ATTITUDE MEASURE II (PRAM II): TECHNICAL REPORT #1: 1970-71 STANDARDIZATION STUDY

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I. INTRODUCTION

The Preschool Racial Attitude Measure (PRAM) has been developed to provide a method for assessing the attitudes of pre-literate children toward light-skinned ("Caucasian") and dark-skinned ("Negro") persons. In its original form (PRAM I), the procedure has been employed in a number of investigations (see Bibliography), the results of which have indicated that the general rationale of the test was sound, and that a revised, psychometrically-improved version would provide a useful research tool for investigators interested in the development and modification of racial attitudes in young children.

The original version of the PRAM procedure was described by Williams and Roberson (1967). The revised procedure, PRAM II is described in the test manual (see Bibliography) which provides information concerning administration, scoring, and score interpretation. The present report is designed to provide more detailed technical information concerning PRAM II, as this was developed out of the first standardization study, conducted during the 1970-71 year.

Several major changes were involved in the PRAM II revision. The procedure was doubled in length to provide a more reliable racial attitude score, or alternatively, to allow for the division of the procedure into two equivalent halves for repeated testing (e.g., pre-post studies). Twenty-four new pictures were drawn to improve the general artistic quality of the stimulus materials and to remove the differential hair color of the figures used in PRAM I, where the light-skinned figure had had blonde hair, and the dark-skinned figure black hair; in PRAM II, both figures have black hair. PRAM II retains the supplementary sex-role score which serves as a useful measure of general conceptual development. The PRAM II materials

may also be used to obtain a measure of racial identification.

PRAM II is currently being standardized for use with Caucasian and Negro preschool children and preliminary percentile norms are provided with the test manual. Users of the procedure are urged to participate in the further standardization of the test by contributing data which they collect by reporting them on the form attached to the back of the manual. The PRAM II stimulus materials consist of 36 8 x 10 color photographs; 24 racial attitude pictures and 12 sex-role pictures. The materials may be purchased, at cost, for $75.00, or may be borrowed for brief periods with the payment of a service charge of $15.00. Copies of the test manual are available without cost.

In the remaining sections of this report: Part II provides a brief summary and bibliography of studies done using the PRAM I procedure; Part III gives a description of the PRAM II test materials; Part IV describes the subject groups and procedures employed in the 1970-71 standardization study; Part V summarizes the findings; and Part VI provides some general comments on the current status of the PRAM II procedure.

II. SUMMARY OF RESEARCH FINDINGS WITH PRAM I

The PRAM I procedure (Williams and Roberson, 1967) employs a picture-story technique to generate a racial attitude score. These scores may range from 0-12, with low scores indicative of a pro-Negro, anti-Caucasian bias (N+/C-), high scores indicative of a pro-Caucasian/anti-Negro bias (C+/N-): and scores in the mid-range (around 6) indicative of no racial bias.

PRAM I has been administered to a variety of groups of preschool children, in the course of a number of different investigations. Table 1, page 4, provides a description of some of these groups and reports the mean Racial Attitude (RA) score for each. Among the Caucasian groups, it will be noted that all mean scores were on the high or C+/N- side. A similar observation can be made concerning the Negro groups where the C+/N- bias was also evident, although to a somewhat lesser degree. Thus, both Caucasian and Negro children display a tendency to positively evaluate the light-skinned figure and negatively evaluate the dark-skinned figure, with this tendency being somewhat less pronounced among Negro children.

As the means in Table 1 suggest, PRAM I scores have been found to have little variation with such variables as geographical region and social class and only a slight positive correlation with chronological age, in the age groups studied.

Attitude Change Studies

PRAM I has been used in several studies to assess the results of efforts to modify racial attitudes in preschool children. In one type of study, behavior modification techniques have been used to change the child's tendency to view the color white positively and the color black negatively, with a resulting reduction in C+/N- bias (McAdoo, J., 1970;

Table 1

MEAN RACIAL ATTITUDE (RA) SCORES IN VARIOUS STUDIES (PRAM-I)

Investigator (s)	N	Av. Age	Race of E	Social Class	State-Year	Mean RA
Caucasian Groups						
Williams and Roberson (1967)	111	5-4	Cauc.	M	N.C. ('66)	10.3
Williams and Edwards (1969)	84	5-6	Cauc.	M	N.C. ('67)	9.6
Thompson *	27	3-8	Cauc.	(?)	Calif. ('68)	9.1
Bridges *	31	4-8	Cauc.	M	Texas ('69)	9.7
Bridges *	24	6-11	Cauc.	L	Texas ('69)	11.5
Firestone and Feinstein*	16	4-11	Cauc.	(?)	Conn. ('69)	10.0
Keller *	24	5-9	Cauc.	mixed(L&M)	Ohio ('70)	9.8
Tse*	30	4-4	Cauc.	M	N.Y. ('71)	10.0
				(Mean of Caucasian Means = 10.0)		
Negro Groups						
Vocke (1971)	45	5-5	Cauc.	L	S.C. ('70)	9.5
Vocke (1971)	45	5-5	Negro	L	S.C. ('70)	8.6
McAdoo, H. (1970)	35	5-1	Negro	L	Mich. ('70)	8.7
McAdoo, H. (1970)	43	5-6	Negro	L	Miss. ('70)	8.9
McAdoo, J. (1970)	65	4-6	Negro	L	Mich. ('70)	7.8
				(Mean of Negro Means = 8.7)		

* Data from unpublished studies

Williams and Edwards, 1969). In a second type of study, behavior modification techniques have been used directly to reverse the child's C+/N- bias and create a N+/C- bias (Edwards and Williams, 1970; McMurtry and Williams, in press). In a third type of study, special curriculum programs have been employed in an effort to modify the C+/N- bias, but without success (McAdoo, J., 1970; Walker, 1971).

Color Meaning Studies

Concurrent with the development of the PRAM I technique, a number of studies have been conducted using the Color Meaning Test (CMT), a procedure which assesses the young child's evaluative responses to the colors black and white. These studies are included in the bibliography since this topic has at least indirect implications for the understanding of racial attitudes, and since the CMT rationale and procedure are quite similar to those of PRAM I.

Bibliography

A. References for PRAM I

The first paper describes the PRAM I instrument and procedure, and reports racial attitude scores of preschool Caucasian children. Papers two and three report racial attitude scores of preschool Negro children. Papers four through eight report on attitude change studies employing the PRAM I materials.

1. Williams, J. E., and Roberson, J. K. A method of assessing racial attitudes in preschool children. Educational and Psychological Measurement, 1967, 27, 671-689.

2. Vocke, J. M. Measuring racial attitudes in preschool Negro children. Master's Thesis, University of South Carolina, 1971.

3. McAdoo, H. P. Racial attitudes and self-concepts of Black preschool children. Doctoral Dissertation, University of Michigan, 1970.

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4. Williams, J. E., and Edwards, C. D. An exploratory study of the modification of color concepts and racial attitudes in preschool children. Child Development, 1969, 40, 737-750.

5. Edwards, C. D., and Williams, J. E. Generalization between evaluative words associated with racial figures in preschool children. Journal of Experimental Research in Personality, 1970, 4, 144-155.

6. McMurtry, C. A., and Williams, J. E. The evaluation dimension of the affective meaning system of the preschool child. Developmental Psychology, in press.

7. McAdoo, J. L. An exploratory study of racial attitude change in Black preschool children using differential treatments. Doctoral Dissertation, University of Michigan, 1970.

8. Walker, P. A. The effects of hearing selected children's stories that portray Blacks in a favorable manner on the racial attitudes of groups of Black and White kindergarten children. Doctoral Dissertation, University of Kentucky, 1971.

B. References for PRAM II

1. Williams, J. E. Preschool Racial Attitude Measure II (PRAM II): General Information and Manual of Directions. Department of Psychology, Wake Forest University, Winston-Salem, North Carolina, (1971).

2. Williams, J. E. Preschool Racial Attitude Measure II (PRAM II): Technical Report #1: 1970-71 Standardization Study. Department of Psychology, Wake Forest University, Winston-Salem, North Carolina, (1971).

C. References on Related Color Meaning Studies

1. Renninger, C. A., and Williams, J. E. Black-white color connotations and race awareness in preschool children. Perceptual and Motor Skills, 1966, 22, 771-785.

2. Williams, J. E., and Roberson, J. K. A method of assessing racial attitudes in preschool children. Educational and Psychological Measurement, 1967, 27, 671-689.

3. Williams, J. E., and Edwards, C. D. An exploratory study of the modification of color concepts and racial attitudes in preschool children. Child Development, 1969, 40, 737-750.

4. Williams, J. E., and Rousseau, C. A. Evaluation and identification responses of Negro preschoolers to the colors black and white. Perceptual and Motor Skills, 1971, 33, 587-599.

5. Skinto, S. M. Racial awareness in Negro and Caucasian elementary school children. Master's Thesis, West Virginia University, 1969.

6. Gordon, L. H. Responses of preschool children to potency, activity, and evaluative adjectives. Master's Thesis, Wake Forest University, 1970.

7. McAdoo, J. L. An exploratory study of racial attitude change in Black preschool children using differential treatments. Doctoral Dissertation, University of Michigan, 1970.

8. Vocke, J. M. Measuring racial attitudes in preschool Negro children. Master's Thesis, University of South Carolina, 1971.

9. Figura, A. L. The effect of peer interaction on the self-concept of Negro children. Master's Thesis, DePaul University, 1971.

III. DESCRIPTION OF PRAM II TEST MATERIALS

PRAM II consists of 36 8 in. x 10 in. color photographs with 36 accompanying stories which provide 24 racial attitude choices and 12 sex-role choices. The items are presented in the order shown in Appendix A, with one sex role (SR) item followed by two racial attitude (RA) items throughout the test. Appendix A also gives a brief description of each picture, and the story and key question for each item. The two figures in each of the 24 RA pictures are identical except for skin color; one has brown skin (the "Negro" figure) and the other has pinkish-tan skin (the "Caucasian" figure). Faces are drawn with a minimum of facial details, and no effort has been made to portray racial characteristics other than skin color. Both figures have black hair and are identical in clothing, posture, etc. The figures portray persons in four age groups: young children, teenagers, young adults, and older adults. There are male and female figures at each age level.

The key words in the questions for the 24 racial attitude items are the 12 positive evaluative adjectives (PEAs) and 12 negative evaluative adjectives (NEAs) seen in Table 2. The standard scoring of the procedure is to count one point for the selection of the light-skinned figure in response to a PEA, and one point for the selection of the dark-skinned figure in response to a NEA. With 24 scoring opportunities, the RA score can range from 0 to 24 with lower scores indicating N+/C- bias, high scores indicating C+/N- bias, and scores in the mid-range (around 12) indicating no racial bias.

The 12 pictures used with the Sex Role (SR) items are composed of male and female figures of the same race and age level, with half of the items showing two dark-skinned figures and half showing two light-

Table 2

ADJECTIVES USED IN PRAM AND CMT PROCEDURES

Positive Evaluative Ajectives (PEA's)	Negative Evaluative Adjectives (NEA's)
clean	bad
good	dirty
kind	mean
nice	naughty
pretty	stupid
smart	ugly
friendly	cruel
happy	sad
healthy	selfish
helpful	sick
right	unfriendly
wonderful	wrong

Note: All 24 adjectives are used in PRAM II procedure. Adjectives above dotted line were also used in PRAM I

skinned figures. The 12 SR stories are based on traditional, sex-typed activities such as "who washes the dishes?; who fixes the car?," etc. One point is scored for choosing the female figure when a traditionally feminine activity is used, and 1 point for choosing the male figure when a traditionally masculine activity is used. The possible range of scores is, thus, 0-12, with high scores indicating a high number of "sex-appropriate" responses, and low scores indicating a reversal of conventional sex-typed responses.

Equivalent Short Forms

PRAM II has been designed so that it may be employed, as just described, to obtain RA and SR scores of maximum reliability by employing the full 36 item procedure. The standardization data, reported below, indicate that the procedure can also be divided into two equivalent halves (Series A and Series B) for re-testing purposes, e.g., in "pre-post" studies of attitude change. As shown in Appendix A, Series A consists of items 1-18, while Series B consists of items 19-36. When employed in this way, each series generates RA scores ranging from 0-12 and SR scores ranging from 0-6. When Series A and B are given separately, it is recommended that Series A be given first and Series B given at the later date.

IV. 1970-71 STANDARDIZATION STUDY: SUBJECT GROUPS AND PROCEDURE

The general design of the study was to administer PRAM II and the Peabody Picture Vocabulary Test (PPVT) to Caucasian and Negro preschool children using Caucasian and Negro examiners with both subject groups.

Subjects

Subjects for the study were 232 preschool children from the Winston-Salem, N. C. area: 128 Caucasian children and 104 Negro children. The children ranged in age from 37 months to 80 months with a mean of 64.9 months. The Caucasian children were obtained primarily through church-related preschool and kindergarten programs, with a lesser number from the local Head Start program. The Negro children were obtained primarily through the Head Start program, with a lesser number from the church-related programs. In addition a special group of 22 middle-class Negro children were obtained through the Child Development Program of the local Academic Urban Affairs Consortium. Even with the addition of this latter group, the Negro subject group consisted primarily of children from lower socio-economic families, while the Caucasian subject group was primarily from middle-class families. With regard to sex ratio, the Caucasian sample was composed of 70 boys and 58 girls, while the Negro sample was composed of 37 boys and 67 girls.

Examiners

Examiners for the study were one graduate, and four undergraduate, college students. The graduate student and two of the undergraduates were Caucasian; the other two undergraduates were Negro. All examiners were carefully trained in administering the PRAM II and PPVT procedures.

Procedure

Half of the children in each race of subject group (Caucasian and Negro) were assigned to examiners of their own race, with the other

half assigned to examiners of the other race.

PRAM II and the PPVT were administered, in that order, to each child. In order to study the equivalence of the two halves of PRAM II, approximately one half of the Ss received Series A (Items 1-18) followed by Series B (Items 19-36), while the other half received Series B followed by Series A. With the exception of 6 middle-class Negro children who were tested at the University, all testing was done in private rooms at the children's schools.

General Design and Summary Data

The joint variation in race of subject and race of examiner produced four major groups in the study: Group CC - Caucasian children tested by Caucasian examiners; Group CN - Caucasian children with Negro examiners; Group NC - Negro children with Caucasian examiners; and Group NN - Negro children with Negro examiners.

Table 3 provides summary data regarding chronological age and sex-ratio for each of the four groups. It will be noted that the four groups were closely matched in terms of mean chronological age, and that the two Caucasian subject groups were well-matched in terms of sex-ratio, as were the two Negro subject groups. The reader may wish to take particular note of the general format of Table 3, which will be used extensively in the following section of the paper in reporting the findings of the standardization study.

Table 3

SUMMARY DATA FOR THE FOUR MAJOR RESEARCH GROUPS

Race of Subject	Race of Examiner: Caucasian	Race of Examiner: Negro
Caucasian	Group CC N = 64 M/F = 39/25 $\overline{X}$ C. A. = 64.7 mos.	Group CN N = 64 M/F = 31/33 $\overline{X}$ C. A. = 66.1 mos.
Negro	Group NC N = 52 M/F = 18/34 $\overline{X}$ C. A. = 64.6 mos.	Group NN N = 52 M/F = 19/33 $\overline{X}$ C. A. = 63.9 mos.

V. 1970-71 STANDARDIZATION STUDY: FINDINGS

The results of the 1970-71 standardization study are described in this portion of the report together with certain interpretations of the findings. The presentation is organized in the following manner. In Section A, attention is given to the question of race of subject, and race of examiner, effects on the three measures obtained from each subject--Racial Attitude (RA) score, Sex Role (SR) score, and Peabody Picture Vocabulary IQ (PPVT). In Section B, an examination is made of the equivalence of the two halves of PRAM II, Series A and Series B. Section C deals with the reliability of the RA scores, and with the question of practice effects on RA scores. Section D is concerned with reliability and practice effects for the SR scores. Section E reports on the relation of PRAM II scores to other subject variables such as age, IQ, sex, and social class. Section F deals with the relation of old and new portions of PRAM II, while Section G is concerned with the relation of scores from PRAM II to scores from PRAM I. Section H reports on item analyses of the racial attitude items in the Caucasian and Negro subject groups. Unless otherwise stated, the .05 level was employed to establish statistical significance.

A. Race of Subject x Race of Examiner Effects on RA, SR, and PPVT Scores

1. Racial Attitude (RA) Scores

RA scores were determined by counting the number of times the child selected the light-skinned figures in response to PEAs, plus the number of times he selected dark-skinned figures in response to NEAs. With 24 response opportunities, the RA scores thus had a possible range of 0-24 with a mid-point of 12. Low scores were indicative of a pro-Negro, anti-Caucasian bias (N+/C-); high scores were indicative of a pro-Caucasian anti-Negro bias (C+/N-); and mid-range scores indicated no consistent racial bias.

Figure 1 displays the frequency distribution of RA scores in each of the four primary research groups. Table 4 presents the mean RA score in the four groups. A 2 x 2 analysis of variance of these data

Table 4

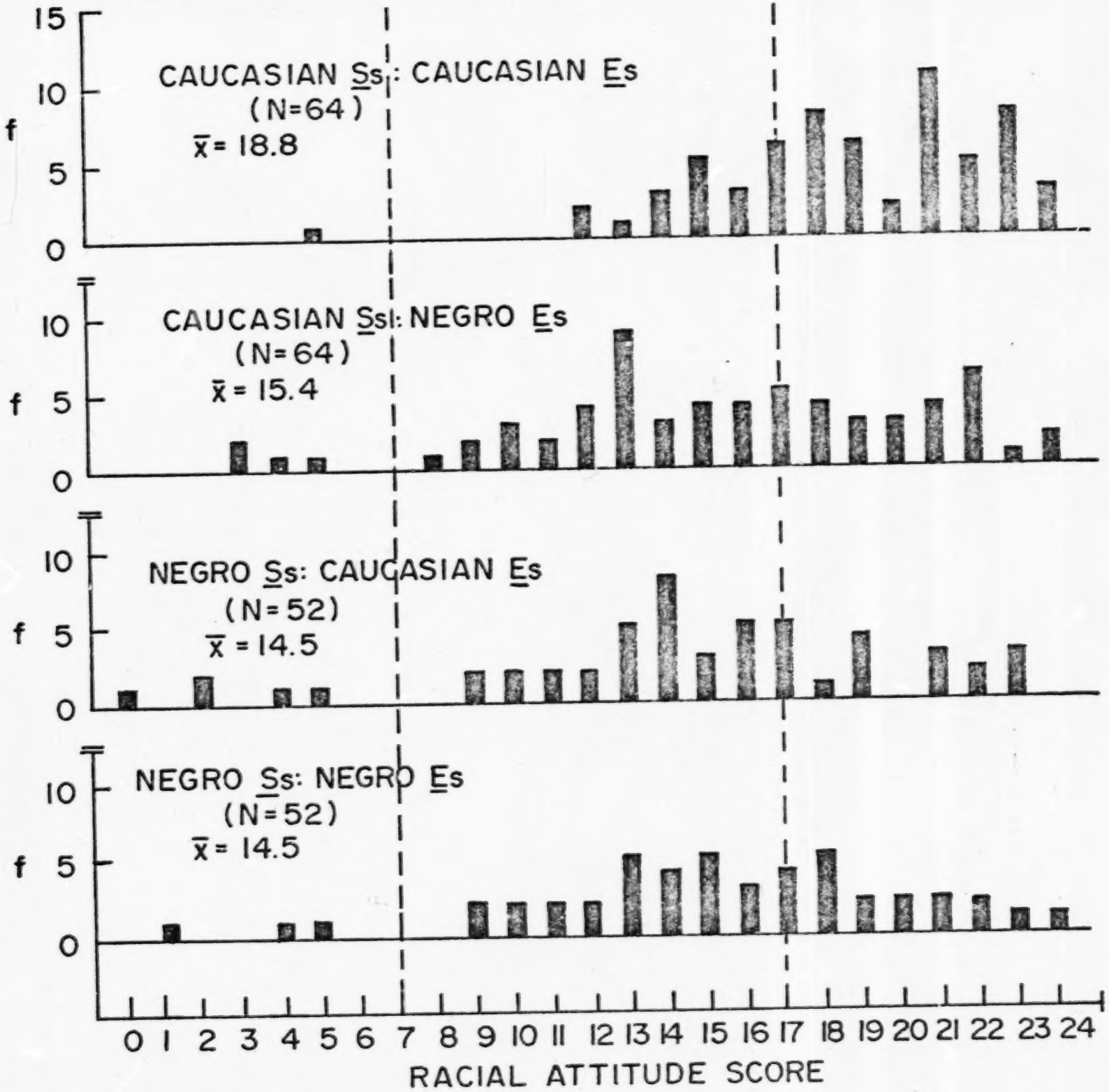
MEAN RACIAL (RA) SCORES IN FOUR MAJOR RESEARCH GROUPS

	Race of Examiner	
	Caucasian	Negro
Race of Subject		
Caucasian	Group CC $\overline{X}$ = 18.8 (N = 64)	Group CN $\overline{X}$ = 15.4 (N = 64)
Negro	Group NC $\overline{X}$ = 14.5 (N = 52)	Group NN $\overline{X}$ = 14.5 (N = 52)

revealed a significant interaction between race of subject and race of examiner. For Negro subjects, the same mean score (14.5) was obtained with Negro and Caucasian examiners. For Caucasian subjects, the mean score obtained with Negro examiners (15.4), was significantly lower than the mean score (18.8) obtained with Caucasian examiners. Other statistical comparisons indicated that: the CC mean (18.8) was significantly higher than the two Negro group means, (14.5) but the CN mean (15.4) was not; all group means were significantly higher than 12, the chance mid-point of the scale.

Appendix C provides a table of percentile equivalents of racial attitude scores for Group CC, Group CN, and the combined Negro subject group.

FREQUENCY DISTRIBUTIONS OF RACIAL ATTITUDE SCORES


CAUCASIAN Ss: CAUCASIAN Es
(N=64)
x̄ = 18.8
CAUCASIAN Ss: NEGRO Es
(N=64)
x̄ = 15.4
NEGRO Ss: CAUCASIAN Es
(N=52)
x̄ = 14.5
NEGRO Ss: NEGRO Es
(N=52)
x̄ = 14.5
f
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
RACIAL ATTITUDE SCORE

19

Figure 2 presents a classification of the scores from Figure 1 in terms of the per cent of subjects in each of the four groups who displayed pro-Negro (N+), pro-Caucasian (C+), or no (O) bias. For purposes of this analysis, scores of 7 or down were classified as N+, scores of 17 and up were classified as C+, and scores of 8-16 were classified as O. These cutting points were established after determining from the binomial distribution that scores of 0-7, or 7-24, would occur by chance (i.e., in unbiassed Ss) only 3 times in a hundred. An examination of Figure 2 reveals, again: (1) the tendency for all groups to have more C+ than N+ bias, and (2) the race of examiner effect for the Caucasian subjects.

Interpretation: Both Caucasian and Negro children have a tendency toward the positive evaluation of light-skinned figures and negative evaluation of dark-skinned figures. This tendency is more pronounced among Caucasian children, particularly when tested by a Caucasian examiner. The display of this tendency among Negro children does not seem to be influenced by the race of the examiner.

2. Sex-Role (SR) Scores

SR scores were determined by counting the number of sex-appropriate responses given by each child to the twelve SR items. These scores ranged from 0-12 with 6 as a chance mid-point.

The mean SR scores in each of the four primary research groups is seen in Table 5, where it can be seen that the mean score in each group was quite high ranging from 10.2 in Group NN to 11.8 in Group CC. When these scores were analyzed by a 2 x 2 ANOVA it was found that the race of subject and race of examiner effects were significant but the interaction was not: Caucasian Ss made significantly higher scores than Negro Ss; Caucasian Es obtained significantly higher scores than Negro Es. Frequency distributions of SR scores for each of the four research groups are given in Appendix D.

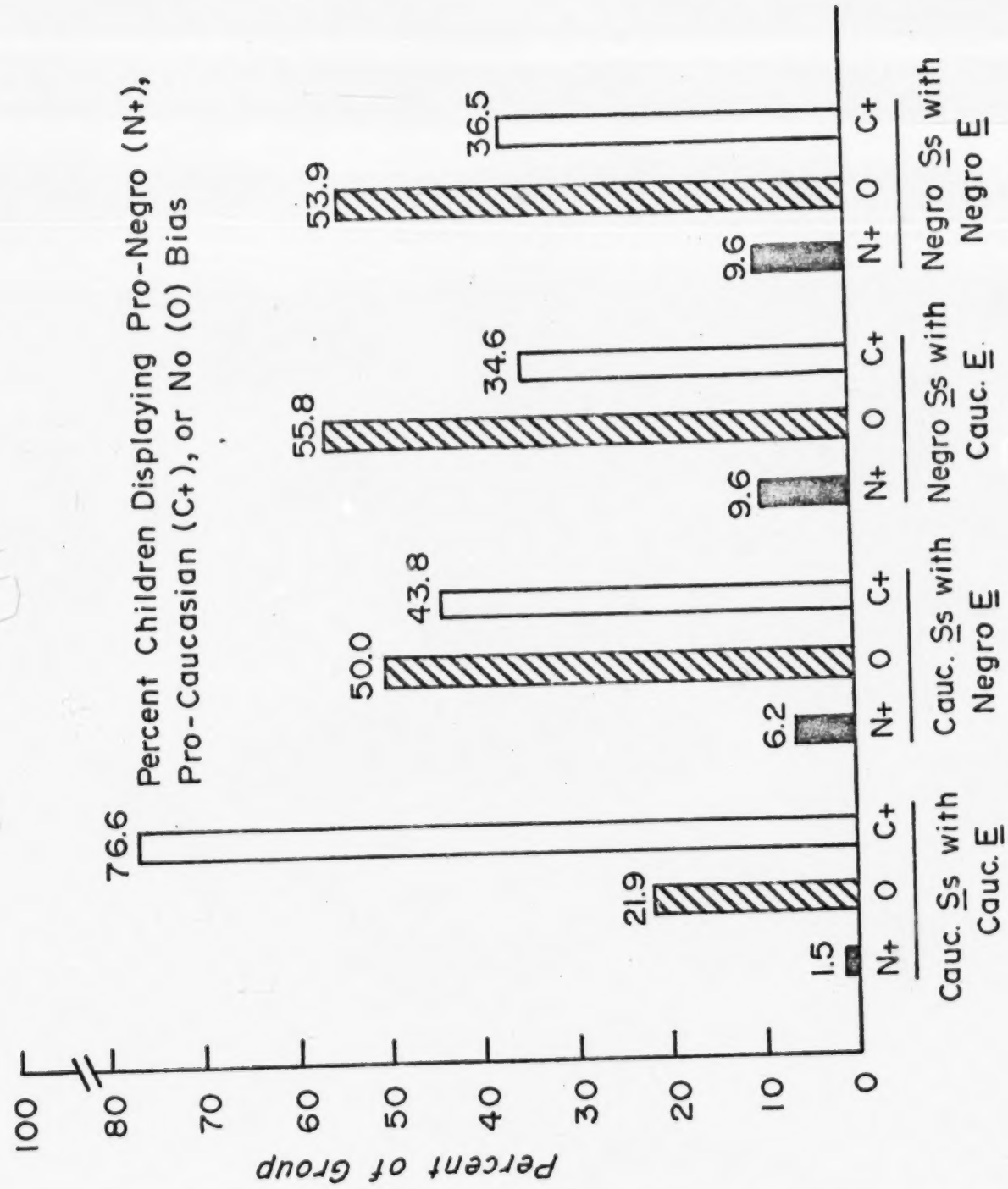

Percent Children Displaying Pro-Negro (N+), Pro-Caucasian (C+), or No (O) Bias
Percent of Group
100
80
70
60
50
40
30
20
10
0
76.6
21.9
1.5
50.0
43.8
6.2
55.8
34.6
9.6
53.9
36.5
9.6
N+ O C+
Caucasian Ss with Caucasian E
Caucasian Ss with Negro E
Negro Ss with Caucasian E
Negro Ss with Negro E

Table 5

MEAN SEX ROLE (SR) SCORES IN FOUR MAJOR RESEARCH GROUPS

	Race of Examiner: Caucasian	Race of Examiner: Negro	
Race of Subject: Caucasian	Group CC $\overline{X}$ = 11.8 (N = 64)	Group CN $\overline{X}$ = 11.3 (N = 64)	$\overline{X}$ Caucasian Ss = 11.5
Race of Subject: Negro	Group NC $\overline{X}$ = 11.2 (N = 52)	Group NN $\overline{X}$ = 10.2 (N = 52)	$\overline{X}$ Negro Ss = 10.7
	$\overline{X}$ Caucasian Es = 11.5	$\overline{X}$ Negro Es = 10.8	

Interpretation: All groups showed relatively high awareness of sex-appropriate behaviors. Caucasian children displayed somewhat more awareness than did Negro children, and the children tested by Caucasian examiners displayed somewhat more awareness than did the children tested by Negro examiners. While the former result may be related to different subcultural experiences with sex-roles, the latter result remains puzzling.

3. Peabody Picture Vocabulary Test (PPVT) Scores

PPVT-IQ scores were obtained in the standard manner described in the PPVT test manual.

The mean PPVT-IQ in each of the four primary research groups is seen in Table 6. A 2 x 2 ANOVA revealed a significant main effect of race of subject with a non-significant main effect of race of examiner, and a non-significant interaction effect.

Interpretation: The largely middle-class Caucasian children performed significantly better on the picture vocabulary test than did the largely lower-class Negro children. This effect was equally true when the examiner was Caucasian, and when the examiner was Negro.

Table 6

MEAN PEABODY PICTURE VOCABULARY TEST (PPVT) IQs IN FOUR MAJOR RESEARCH GROUPS

	Race of Examiner: Caucasian	Race of Examiner: Negro	
Race of Subject: Caucasian	Group CC $\overline{X}$ = 109.7 (N = 64)	Group CN $\overline{X}$ = 107.4 (N = 64)	$\overline{X}$ Caucasian Ss = 108.5
Race of Subject: Negro	Group NC $\overline{X}$ = 84.9 (N = 52)	Group NN $\overline{X}$ = 82.0 (N = 52)	$\overline{X}$ Negro Ss = 83.5
	$\overline{X}$ Caucasian Es = 98.6	$\overline{X}$ Negro Es = 95.1	

B. Equivalence of Scores from Series A and Series B

1. Racial Attitude (RA) Scores

The RA score for Series A was obtained by scoring the 12 RA items contained in items 1-18 of the test; the RA score for Series B was obtained in like manner from the 12 RA items contained in items 19-36 of the test. Approximately half of all subjects had taken the test in A/B order while the other half had had B/A order.

The mean A and B scores for the four primary research groups are shown in Table 7.

The comparability of RA scores from Series A and Series B of the test was assessed by a three-dimensional ANOVA with the usual between subject variables of race of subject and race of examiner, and the within-

Table 7

MEAN RA PART-SCORES FOR SERIES A AND SERIES B

	Race of Examiner: Caucasian	Race of Examiner: Negro	
Race of Subject: Caucasian	Group CC $\overline{X}_A$ = 9.3 $\overline{X}_B$ = 9.5 (N = 64)	Group CN $\overline{X}_A$ = 7.7 $\overline{X}_B$ = 7.7 (N = 64)	$\overline{X}_A$ Caucasian Ss = 8.5 b $\overline{X}_B$ Caucasian Ss = 8.6
Race of Subject: Negro	Group NC $\overline{X}_A$ = 7.4 $\overline{X}_B$ = 7.1 (N = 52)	Group NN $\overline{X}_A$ = 7.3 $\overline{X}_B$ = 7.2 (N = 52)	$\overline{X}_A$ Negro Ss = 7.4 $\overline{X}_B$ Negro Ss = 7.1
	$\overline{X}_A$ Caucasian Es = 8.5 $\overline{X}_B$ Caucasian Es = 8.4	$\overline{X}_A$ Negro Es = 7.5 $\overline{X}_B$ Negro Es = 7.5	

subject variable, Series A vs Series B. The results of this analysis revealed a non-significant main effect of A vs B, and non-significant interactions of this variable with race of examiner and race of subject. (The between subjects effects noted earlier were again found.) The mean score for all Ss on Series A was 7.98, while the mean score on Series B was 7.95.

Interpretation: Series A and Series B appear to generate similar RA scores and can, thus, be considered equivalent short-forms of the RA measure.

2. Sex Role (SR) Score

The SR score for Series A was obtained by scoring the 6 SR items contained in items 1-18 of the test; the SR score for Series B was obtained in like manner from the 6 SR items contained in items 19-36 of the test. Approximately half of all subjects had taken the test in A/B order while the other half had had B/A order.

The mean SR scores for Series A and B for the four primary research groups are shown in Table 8.

Table 8

MEAN SEX ROLE (SR) PART-SCORES FOR SERIES A AND SERIES B

	Race of Examiner: Caucasian	Race of Examiner: Negro	
	Group CC	Group CN	
Race of Subject: Caucasian	$\overline{X}_A$ = 5.9	$\overline{X}_A$ = 5.7	$\overline{X}_A$ Caucasian Ss = 5.8
	$\overline{X}_B$ = 5.8	$\overline{X}_B$ = 5.6	$\overline{X}_B$ Caucasian Ss = 5.7
	(N = 64)	(N = 64)	
	Group NC	Group NN	
Race of Subject: Negro	$\overline{X}_A$ = 5.5	$\overline{X}_A$ = 5.1	$\overline{X}$ Negro Ss = 5.3
	$\overline{X}_B$ = 5.7	$\overline{X}_B$ = 5.1	$\overline{X}$ Negro Ss = 5.4
	(N = 52)	(N = 52)	
	$\overline{X}_A$ Caucasian Es = 5.7	$\overline{X}_A$ Negro Es = 5.4	
	$\overline{X}_B$ Caucasian Es = 5.8	$\overline{X}_B$ Negro Es = 5.4	

The comparability of SR scores from Series A and Series B of the test was assessed by a three-dimensional ANOVA with the usual between subject variables of race of subject and race of examiner, and the within-subject variable, Series A vs Series B. The results of this analysis revealed a non-significant main effect of A vs B, and non-significant interactions of this variable with race of examiner and race of subject. (The between subject effects noted earlier were again found.) The mean scores for all Ss on Series A and Series B were identical: 5.57.

Interpretation: Series A and Series B appear to generate similar SR scores and can, thus, be considered equivalent short-forms of the SR measure.

C. Reliability of RA Scores and Practice Effects

1. Reliability: Equivalence

The split-half reliability of the total RA scores was determined by intercorrelating the scores obtained from Series A and Series B, which had previously been shown to be equivalent halves of the test. The product moment correlation coefficients (r_{AB}) of equivalence for Series A vs Series B scores, in the four principal research groups, are displayed in Table 9, together with the Spearman-Brown estimates (r_T) of the reliabilities of the total RA scores.

It will be noted that the Spearman-Brown coefficients were generally in the low 80's; the exception was the coefficient of .43 for Group CC. This relatively low value seems most likely related to the restricted range of scores in this research group, as compared with the other three groups.

The correlation for all Ss between the twelve-item Series A and the twelve-item Series B scores was .67 which is the best estimate of the reliability of the RA part-scores obtained from either Series A or Series B. The Spearman-Brown estimate of the reliability of the total RA scores was .80, which is the best estimate of the reliability of the RA scores

based on the total 24 items of the test.

Table 9

COEFFICIENTS OF EQUIVALENCE (r_{AB}) FOR RA PART-SCORES FROM SERIES A AND SERIES B WITH (r_T) SPEARMAN-BROWN ESTIMATES OF RELIABILITIES (r_T) OF TOTAL SCORES

	Race of Examiner		
	Caucasian	Negro	
	Group CC	Group CN	
Caucasian	r_{AB} = .39	r_{AB} = .72	r_{AB} Caucasian Ss = .62
	r_T = .43	r_T = .84	r_T Caucasian Ss = .79
	(N = 64)	(N = 64)	
Race of Subject			
	Group NC	Group NN	
Negro	r_{AB} = .69	r_{AB} = .73	r_{AB} Negro Ss = .70
	r_T = .82	r_T = .84	r_T Negro Ss = .82
	(N = 52)	(N = 52)	
	r_{AB} Caucasian Es = .69	r_{AB} Negro Es= .73	r_{AB} All Ss = .67
	r_T Caucasian Es = .82	r_T Negro Es = .84	r_T All Ss = .80

2. Reliability: Stability

A special study was conducted to assess the stability of RA scores across a substantial time interval. This was accomplished by re-testing a group of children from research Group CC. This was a "target of opportunity" and not the ideal testing ground due to the restricted range of scores in the

CC group, noted above. Thirty-eight Caucasian children from Group CC who had been originally tested in the fall of 1970 were retested four months later in the spring of 1971 by a different Caucasian examiner. When the total RA scores from the first and second administrations were correlated a coefficient of .46 was obtained. While not high in absolute terms, it can be noted that this value is almost identical with the Spearman-Brown estimate of the coefficient of equivalence (.43) for total RA scores in the total Group CC. Thus, it will appear from this limited test that the reliability of the RA scores, assessed in terms of stability across a four-month interval, was virtually the same as the reliability of the scores assessed in terms of equivalence at a single administration.

One other way to examine the stability of the RA scores across time is to study the difference in the two RA scores obtained by the 38 Group CC Ss on the two administrations of the procedure, four months apart. Analyzed in this way it was determined that: 47% of the subjects had score changes of 0 ± 1; 63% had score changes of 0 ± 2; and 76% had score changes of 0 ± 3. Thus, almost half of the subjects' scores changed by one point or less, while only one fourth of the subjects had a score change of four or more. Considering the possible score range of 0-24, and the actual range of 5-24 obtained for the total Group CC, these score changes appear rather small and provide additional evidence of the stability of the scores across this time interval.

Interpretation: The evidence from equivalence and stability studies indicates that the total RA scores from PRAM II have sufficient reliability to make them of value in research studies of racial attitude in preschool children.

3. Practice Effects

Data from the 38 CC subjects in the stability study were employed to assess the question of practice effects on RA scores. At each of the two

administrations, a separate part-score was calculated for the first half of the procedure and for the second half of the procedure. At the first administration, the first half mean was 9.53, and the second half mean was 9.84. At the second administration, the 1st half mean was 9.79, and the second half mean was 9.95. The overall mean for the first administration was 19.4, while that for the second was 19.8. There was, thus, the suggestion of a slight positive practice effect but statistical tests indicated that it was not significant.

Interpretation: RA scores are not subject to any appreciable practice effects upon repeated administrations of the procedure.

D. Reliability of SR Scores and Practice Effects

As noted earlier, the subjects in the study generally obtained sex role scores near the upper limit of the score range which would act to lower the reliability coefficients computed for the SR scores. In spite of this restriction, the correlation coefficient computed between the SR scores obtained from Series A and Series B was .51. When this value was used with the Spearman-Brown formula to estimate the reliability of the total SR scores, the resulting coefficient was .68 which is the best estimate of the reliability of the SR scores based on the total 12 items of the test.

Interpretation: The SR scores have sufficient reliability to make them of value in research studies of preschool children.

The mean SR score of the 38 Group CC subjects who were tested twice with a four month interval was 11.8 at the first testing and 11.9 at the second testing thus providing no evidence of any practice effects on the SR measure.

Interpretation: There is no evidence of practice effects with SR scores.

E. Relation of PRAM II RA and SR Scores to Other Subject Variables

Table 10 summarizes product-moment correlations among the subject variables of racial attitude (RA), sex-role (SR), chronological age (CA), and Peabody Picture Vocabulary Test (PPVT) IQ. It will be observed that the two PRAM II scores, RA and SR, showed only a weak positive correlation (.19), indicating that the two PRAM II scores are largely independent of one another.

Table 10

INTERCORRELATIONS OF RACIAL ATTITUDE (RA) SCORES, AND SEX ROLE (SR) SCORES WITH CHRONOLOGICAL AGE (CA), AND PEABODY PICTURE VOCABULARY TEST (PPVT) IQs FOR ALL 232 SUBJECTS

	SR	CA	IQ
RA	r = .19 ($p < .01$)	r = .08 (n.s.)	r = .14 ($p < .05$)
SR		r = .40 ($p < .01$)	r = .40 ($p < .01$)

1. Chronological Age

The lack of correlation between RA and CA scores, seen in Table 10, indicates that RA scores are not related to the subjects' age, in the age range studied.

A significant positive correlation (.40) was found between the SR scores and CA, indicating that older children tended to get higher SR scores than younger children.

Interpretation: The tendency among preschool children to positively evaluate light-skinned figures, and negatively evaluate dark-skinned figures does not change systematically with age but older children show more evidence of knowledge of conventional sex-typed behaviors than do younger children.

2. Peabody Picture Vocabulary Test--IQ

RA scores showed a weak positive relationship with PPVT-IQ scores (r = .14), indicating perhaps 2% common variance between these scores, and suggesting that the RA scores were essentially independent of PPVT-IQ scores among the children in the study.

SR scores were found to have a significant positive correlation (.40) with PPVT-IQ scores indicating a substantial tendency for brighter children to get higher SR scores.

Interpretation: Individual differences in RA scores are not related to verbal IQ, i.e., bright and dull children score similarly on the test. For SR scores, bright children tend to show more evidence of conventional sex-typed behaviors than do duller children.

3. Sex of Subjects

Table 11 presents the four basic research groups, with separate RA means computed for the male and female subjects in each group. It will be observed that in each group the mean scores for males was higher than that for females. When the male-female difference in each group was tested statistically, in no case was it found to be significant. When the mean score for all male Caucasian Ss (17.7) was compared with that for all female Caucasian Ss (16.4), the difference was statistically non-significant. A similar non-significant result was obtained when the mean for all Negro males (15.5) was compared with the mean for all Negro females (13.9). Only when the mean for all 107 male Ss (16.9) was compared with the mean for all 125 female Ss (15.1) did the difference reach significance at the .05 level.

SR scores of male and female subjects were subjected to the type of analysis just described for RA scores with no consistent evidence of sex differences in SR scores being found. The overall SR mean for the 107 male Ss was 11.3 while that for the 125 female Ss was 11.0.

Table 11

MEAN RACIAL ATTITUDE (RA) SCORES FOR MALES (M) AND FEMALES (F)

IN EACH OF FOUR BASIC RESEARCH GROUPS

Race of Subject	Race of Examiner: Caucasian	Race of Examiner: Negro	
Caucasian	Group CC $\overline{X}_M$ = 19.1 (N = 39) $\overline{X}_F$ = 18.4 (N = 25)	Group CN $\overline{X}_M$ = 15.9 (N = 31) $\overline{X}_F$ = 14.1 (N = 33)	$\overline{X}_M$ Caucasian Ss = 17.7 (N = 70) $\overline{X}_F$ Caucasian Ss = 16.4 (N = 58)
Negro	Group NC $\overline{X}_M$ = 14.8 (N = 18) $\overline{X}_F$ = 14.3 (N = 34)	Group NN $\overline{X}_M$ = 16.1 (N = 19) $\overline{X}_F$ = 13.5 (N = 33)	$\overline{X}_M$ Negro Ss = 15.5 (N = 37) $\overline{X}_F$ Negro Ss = 13.9 (N = 67)
			$\overline{X}_M$ All Males = 16.9 (N = 107) $\overline{X}_F$ All Females = 15.1 (N = 125)

Interpretation: The data provide no firm evidence regarding sex differences on the RA score but suggest that males may tend to score somewhat higher than females, a tendency which was observed among both Caucasian and Negro children. Boy and girl subjects respond in a highly similar fashion to the sex-role items of PRAM II.

4. Social Class

No systematic study of social class effects on PRAM II scores has yet been made and only scattered evidence can be offered bearing upon this question.

The social-class classification of the data was made by employing the assumptions that: (1) Caucasian and Negro children attending the Head Start programs were from lower-class families; (2) Caucasian and Negro children attending the particular church-related kindergartens used in the study were from middle-class families; (3) Negro subjects obtained through the University Child Development Program in response to a specific request for middle-class children had been, in fact, properly identified. While all of these assumptions are generally tenable, they provide, at best, a very crude basis for classifying the child by social class background.

Table 12 presents the four basic research groups, with a separate RA mean computed for "middle-class" (M) and "lower-class" (L) children in each group. In both of the Caucasian subject groups (CC and CN), it will be observed that the mean RA scores for the lower and middle class children were highly similar, (and not significantly different). In Group NC, where Negro subjects were tested by Caucasian examiners, lower class and middle class children had identical mean scores of 14.5. In Group NN, where Negro children were tested by Negro examiners, the 40 lower class children obtained a mean score of 15.0 while the mean for the 12 middle-class children was 12.8. While the middle class mean is 2.2 points below the lower class mean, the difference was found to be statistically non-significant. On the other hand, the lower class mean of 15.0 is significantly above the chance mean of 12, while the middle class mean of 12.8 is not.

Table 12

MEAN RACIAL ATTITUDE (RA) SCORES FOR "MIDDLE-CLASS" (M) AND "LOWER-CLASS" (L) CHILDREN IN EACH OF FOUR BASIC RESEARCH GROUPS

	Race of Examiner: Caucasian	Race of Examiner: Negro
Race of Subject: Caucasian	Group CC $\overline{X}_M$ = 18.8 (N = 59) $\overline{X}_L$ = 18.8 (N = 5)	Group CN $\overline{X}_M$ = 15.4 (N = 52) $\overline{X}_L$ = 15.5 (N = 12)
Race of Subject: Negro	Group NC $\overline{X}_M$ = 14.5 (N = 10) $\overline{X}_L$ = 14.5 (N = 42)	Group NN $\overline{X}_M$ = 12.8 (N = 12) $\overline{X}_L$ = 15.0 (N = 40)

Interpretation: From the limited data available, it appears that social-class background has little if any influence upon the racial attitudes of Caucasian preschoolers. While the same generalization can be offered for Negro subjects, there was the suggestion that middle-class Negro children may display less C+/N- bias than lower-class Negro children when tested by Negro examiners.

An examination of the SR scores by social-class revealed a tendency for middle-class children in each racial group to score about one point higher than the lower class children of the same group. While this may be a bonafide reflection of class-linked sex-role differences, it may also be merely an indirect reflection of the previously demonstrated correlation of SR scores and IQ, since the middle class children had generally higher IQ's than did the lower class children.

F. Relation of Old and New Portions of PRAM II

As noted earlier, PRAM II is composed of 12 "old" evaluative adjectives from PRAM I, and 12 "new" evaluative adjectives which were added in order to lengthen the procedure. These adjectives are listed in Table 2 where the old adjectives are shown above the dotted line and the new adjectives are shown below. It was considered of interest to analyze the old and new adjective sets to determine whether the subjects were responding in the same manner to both.

Table 13 presents the four primary research groups with two mean scores reported for each; the first based on the subject's responses to the 12 old adjectives and the second based on the subject's responses to the 12 new adjectives. It will be noted that in each group the mean for new adjectives was found to be somewhat lower than the mean for old adjectives. A three-dimensional analysis of variance was conducted to assess the significance of this observed effect, and any possible interactions of this within-subjects effect with the between-subjects effects of race of subject and race of examiner. The ANOVA revealed a significant main effect of old vs new adjectives, indicating that Ss did make lower scores on the new set as opposed to the old set. There were, however, no interactions of this variable with race of subject or race of examiner. In particular, there was no triple interaction effect which means that the double interaction effect of race of subject and race of experimenter based on total RA scores, reported above, was present for both old and new adjectives. For all subjects, the mean old adjective score was 8.4, while the mean new adjective score was 7.5.

Table 13

MEAN RACIAL ATTITUDE PART-SCORES BASED ON 12 "OLD" ADJECTIVES (O) AND 12 "NEW" ADJECTIVES (N)

	Race of Examiner: Caucasian	Race of Examiner: Negro	
Race of Subject: Caucasian	Group CC $\overline{X}_O$ = 10.0 $\overline{X}_N$ = 8.8 (N = 64)	Group CN $\overline{X}_O$ = 8.1 $\overline{X}_N$ = 7.3 (N = 64)	$\overline{X}_O$ Caucasian $\underline{Ss}$ = 9.1 $\overline{X}_N$ Caucasian $\underline{Ss}$ = 8.1
Race of Subject: Negro	Group NC $\overline{X}_O$ = 7.5 $\overline{X}_N$ = 7.0 (N = 52)	Group NN $\overline{X}_O$ = 7.6 $\overline{X}_N$ = 6.9 (N = 52)	$\overline{X}_O$ Negro $\underline{Ss}$ = 7.6 $\overline{X}_N$ Negro $\underline{Ss}$ = 6.9
	$\overline{X}_O$ Caucasian $\underline{Es}$ = 8.9 $\overline{X}_N$ Caucasian $\underline{Es}$ = 8.0	$\overline{X}_O$ Negro $\underline{Es}$ = 7.9 $\overline{X}_N$ Negro $\underline{Es}$ = 7.1	$\overline{X}_O$ All $\underline{Ss}$ = 8.4 $\overline{X}_N$ All $\underline{Ss}$ = 7.5

Interpretation: When scored in the usual manner, the 12 new evaluative adjectives generate a significantly lower part-RA score than do the 12 old evaluative adjectives, i.e., the association of the new PEA's and NEA's with light and dark figures, respectively, is not as pronounced as in the case of the old adjectives. The difference between the two sets may be due to: (1) the new adjectives being less familiar to the subjects, i.e., not as well established in their vocabularies; and/or (2) the new adjectives not carrying the same degree of evaluative connotation as did the old. In any event, the inclusion of the new adjectives on PRAM II serves to reduce the amount of C+/N- bias which subjects demonstrate.

G. Relation of Scores from PRAM II to Scores from PRAM I

To date, no subjects have been administered both PRAM I and PRAM II and, thus, a direct comparison of the two procedures is not possible. However, since PRAM II encorporated several features of PRAM I, indirect comparisons can be made with regard to: (1) responses to the "old" (PRAM I) evaluative adjectives which are included in the PRAM II procedure; (2) responses to the sex-role items which were virtually identical in PRAM I and PRAM II. These comparisons were made by comparing the PRAM II responses in Group CC from the present study with the PRAM I responses given by the Caucasian preschool children in the Williams and Roberson (1967) study, who were also tested by Caucasian examiners. In order to match chronological age of the latter group to that of the former, 11 of the youngest of Williams and Roberson's 111 subjects were randomly eliminated leaving 100 children with a mean age of 64.4 months which compares with the mean age of 64.7 months for the 64 Ss in Group CC. An additional matching factor was that both groups of subjects had been drawn from similar church-related kindergarten programs in the same city.

It should be noted that although the 12 "old" evaluative adjectives and stories and the 12 sex-role items were virtually identical on PRAM I and II, the human figure pictures had been re-drawn for PRAM II with the most obvious change being the elimination of the differential hair color of Caucasian (yellow) and Negro (black) figures which had been present on PRAM I. It can also be observed that the PRAM II data was collected approximately five-years after the PRAM I data and there is the possibility that there may have been some bonafide change across this period in the phenomena being assessed, i.e., racial attitudes and sex-role awareness.

An "old" RA score was computed for each of the 64 Group CC subjects, by scoring responses only to the 12 "old" RA items. The mean of these old

RA scores was 10.0 which was compared with the PRAM I mean RA score of 10.8 computed for the 100 Williams and Roberson subjects. Statistically, the two means were significantly different indicating that the C+/N- tendency as assessed by the "old" RA scores from PRAM II was slightly but significantly lower than the same tendency as assessed by the RA scores of PRAM I. As suggested earlier, this result may be due to a bonafide change in racial attitude across those years, but may also be a result of the changes in the stimulus pictures employed.

The mean SR score obtained from the PRAM II procedure for Group CC was 11.8, while that obtained from the PRAM I procedure for the 100 Williams and Roberson subjects was 11.1, indicating that the SR scores generated by the two procedures were generally similar and, if anything, higher in the PRAM II group than in the PRAM I group.

Interpretation: Viewed globally the PRAM II procedure seems to be tapping the same racial attitude and sex-role variables as did its predecessor, PRAM I. Hence, it seems reasonable to assume that the construct validity of these measures as developed via PRAM I may be extended to the counterpart measures on PRAM II.

H. Item Analyses

Table 14, on the following pages, lists the 12 positive evaluative adjectives (PEA's) and 12 negative evaluative adjectives (NEA's) of PRAM II and reports the per cent of subjects responding to PEA's by selecting light-skinned figures, and per cent of subjects responding to NEA's by selecting dark-skinned figures. The data is presented first for all 232 subjects, followed by separate presentations for the 128 Caucasian subjects and for the 104 Negro subjects. In each column the notation (n) means that the accompanying per cent is not significantly (.05) different, from the chance level of 50%, based on the number of subjects in that particular subject group. In each group of adjectives, the 6 "new" adjectives added in the PRAM II revision are indicated with an asterisk.

Table 14

Item Analyses

Positive Evaluative Adjectives	% Choosing Light-Skinned Figure		
	All Ss	Caucasian Ss	Negro Ss
1. Clean	80.2	84.4	76.8
2. Pretty	70.9	81.3	60.6
*3. Wonderful	70.4	73.5	67.3
4. Good	69.1	80.5	57.7 (n)
5. Smart	66.6	68.8	64.4
6. Nice	66.1	68.9	65.2
*7. Friendly	64.4	67.2	61.6
*8. Helpful	63.6	71.9	54.4 (n)
*9. Healthy	61.8	64.1	59.6
*10. Right	59.3	57.1	61.6
11. Kind	58.5	68.7	48.2 (n)
*12. Happy	56.7	46.1 (n)	67.3
($\bar{X}$ PEA)	(65.6)	(69.4)	(62.1)
Negative Evaluative Adjectives	% Choosing Dark-Skinned Figure		
	All Ss	Caucasian Ss	Negro Ss
1. Dirty	76.8	80.5	73.1
2. Ugly	71.7	78.9	64.4
3. Stupid	71.3	73.5	69.2
4. Mean	67.8	75.0	60.6
5. Naughty	66.2	72.7	59.6
*6. Wrong	65.8	68.0	63.5

Table 14 (Continued)

*7. Unfriendly	65.6	77.4	53.9 (n)
*8. Selfish	63.9	79.7	48.1 (n)
*9. Sad	61.0	63.3	58.7
10. Bad	58.6	71.1	46.2 (n)
*11. Sick	53.6 (n)	62.5	50.9 (n)
*12. Cruel	53.4 (n)	58.6	48.1 (n)
($\overline{X}$ NEA)	(64.6)	(71.8)	(58.0)

* = new adjectives added in PRAM II revision.

1. Data from All 232 Subjects

An examination of the data for all 232 subjects indicates that all 24 of the adjectives were used in the direction expected on the basis of previous research, i.e., PEA's tending more often to be associated with light-skinned figures, and NEA's tending more often to be associated with dark-skinned figures. Considered statistically, all of the PEA's and all but two of the NEA's were significantly (.05) associated with the predicted figure. The two exceptions were sick and cruel which, in the all-subject group, were not associated consistently with either figure.

A further consideration of the data for all subjects indicates that the overall degree of association of PEA's with light-skinned figures ($\overline{X}$% = 65.6) was virtually the same as the overall degree of association of NEA's with dark-skinned figures ($\overline{X}$% = 64.6). It can also be observed that the "new" adjectives in each group tended generally to be less closely associated with the predicted figure, than did the "old" adjectives.

2. Data from the 128 Caucasian Subjects

An examination of the data for the Caucasian children shows that 11 of the 12 PEA's, and all 12 of the NEA's were significantly associated with the predicted figure. The adjective happy was not associated consistently with either figure. For the Caucasian children, the overall degree of association of PEA's with light-skinned figures ($\overline{X}\%$ = 69.4) and the overall degree of association of NEA's with dark-skinned figures ($\overline{X}\%$ = 71.8) were quite similar.

3. Data from the 104 Negro Subjects

The data for Negro subjects revealed generally a lower degree of association of PEA's with light-skinned figures and NEA's with dark-skinned figures, with 8 of the 24 adjectives not consistently associated with either figure (PEA's: good, helpful, kind; NEA's: unfriendly, selfish, bad, sick, cruel). For the Negro children, the degree of association of PEA's with light-skinned figures ($\overline{X}\%$ = 62.1) appeared slightly higher than the degree of association of NEA's with dark-skinned figures ($\overline{X}\%$ = 58.0), but this difference was found to be statistically non-significant.

Although, as noted above, there were several adjectives which were not consistently associated with either figure, in no instance was there a significant reversal in usage, i.e., in no instance did the Negro children associate a PEA with the dark-skinned figure or an NEA with the light-skinned figure.

4. Comparison of Caucasian and Negro Data

A comparision of the item per cents for Caucasian and Negro children reveals: (1) a general tendency for the per cent values to be lower for Negro children than for Caucasian; and (2) a larger number of non-discriminating items among Negro children than among Caucasian children. These findings provide additional confirmation of the previously demonstrated

tendency for the C+/N- bias to be weaker among Negro children than among Caucasian children.

Beyond this, an examination of the item per cents for Caucasian and Negro children reveals evidence of both similarities and differences in the responses of the children. It can be seen, for example, that, in both groups, the same PEA (clean) was most frequently associated with the light-skinned figure, and the same NEA (dirty) was most frequently associated with the dark-skinned figure. On the other hand, the PEA good which the Caucasian subjects associated with the predicted figure 80.5% of the time, was a non-discriminating item for Negro Ss, while the PEA happy which the Negro subjects associated with the light figure 67.3% of the time was non-discriminating among Caucasian subjects. Further research will be required to determine whether such variations in item per cents between the two groups are due merely to sampling fluctuations or are indicative of some significant differences in the way Caucasian and Negro children employ particular evaluative adjectives with respect to light- and dark-skinned human figures.

VI. SUMMARY COMMENTS: CURRENT STATUS OF PRAM II

A sizeable amount of additional research will be required before any final conclusions can be drawn concerning the effectiveness of PRAM II in accomplishing the goals for which it was developed--the provision of a reliable and valid technique for assessing racial attitudes in preschool (i.e., pre-literate) children. With the foregoing in mind, the following statements can be offered as tentative conclusions based on the findings of the 1970-71 standardization study.

1. The Racial Attitude (RA) and Sex-Role (SR) measures possess adequate reliability, in terms both of equivalence and stability, for use in research studies with young children.
2. The PRAM II procedure may be divided into two equivalent halves for use in repeated measure designs. There is no evidence of practice effects as a result of repeated testings.
3. The RA scores from PRAM II seem to possess the same general characteristics as the RA scores from the earlier version of the procedure (PRAM I); and, hence, the construct validity developed through research with the latter can be generalized to the former.
4. Both Caucasian and Negro children obtain RA scores which demonstrate a tendency toward a pro-light-skinned and anti-dark-skinned bias, with this bias being greater for Caucasian children.
5. Negro children obtain the same scores when administered the test by Negro and Caucasian examiners; Caucasian children obtain higher RA scores when tested by Caucasian examiners and lower scores when tested by Negro examiners.

6. Among preschool children, the RA scores appear to be essentially independent of age, verbal IQ, and social class background, thus casting doubt on theories which explain racial attitudes solely in terms of social learning.
7. There is some evidence of a tendency for male children, both Caucasian and Negro, to obtain higher RA scores than female children; more research is needed to clarify this finding.
8. Sex Role (SR) scores are essentially independent of RA scores, but correlate positively with age and verbal I.Q.

At the present time, all of the foregoing conclusions are in need of replication and several additional questions need to be studied through further investigations. Among the latter are:

1. The extension of the age of the groups studied upward into the early school years, and downward as far as possible.
2. The clarification of the race of examiner effect with Caucasian children, perhaps through experimental studies.
3. The further study of the observed tendency for male children to obtain higher RA scores than female children.
4. The further study of the stability of RA scores across time.
5. Further item analyses studies to determine whether certain evaluative adjectives are responded to differently by Caucasian and Negro children.

VII. APPENDICES

APPENDIX A: PRAM II Picture Descriptions and Stories

APPENDIX B: Raw Data From 1970-71 Standardization Study

APPENDIX C: Percentile Equivalent of Racial Attitude Scores in Three Groups of Preschool Children

APPENDIX D: Sex-Role Scores of Ss in the 1970-71 Standardization Study

APPENDIX A

PRAM II Pictures and Stories

(SR = Sex Role Items; RA = Racial Attitude Items)

SERIES A

1. SR - Caucasian girl - Caucasian boy sitting

   Here are two children. One of these children has four dolls with which they like to have tea parties. Which child likes to play with dolls?

2. RA - Negro little boy - Caucasian little boy - walking

   Here are two little boys. One of them is a kind little boy. Once he saw a kitten fall into a lake and he picked up the kitten to save it from drowning. Which is the kind little boy?

3. RA - Caucasian little girl - Negro little girl - standing

   Here are two little girls. One of them is an ugly little girl. People do not like to look at her. Which is the ugly little girl?

4. SR - Negro teenage boy - Negro teenage girl - sitting

   Here are two children. They are thinking about what they want to be when they grow up. One of them wants to be a policeman. Which one wants to be a policeman?

5. RA - Caucasian teenage boy - Negro teenage boy - standing

   Here are two boys. One of them is a friendly boy. He has a lot of friends. Which one is the friendly boy?

6. RA - Negro teenage girl - Caucasian teenage girl - walking

   Here are two girls? When a lady asked one of them where she lived, the girl gave the wrong answer. Which is the wrong girl?

7. SR - Caucasian man - Caucasian woman - walking

   Here are two people. After supper one of these people clears the table and washes all the dishes. Which person washes the dishes?

8. RA - Caucasian woman - Negro woman - sitting

   Here are two women. One of them is a nice woman. She does nice things for her husband and children. Which is the nice woman?

9. RA - Negro man - Caucasian Man - standing

   Here are two men. One of them is a bad man. He took money out of his children's piggy bank and never put it back. Which is the bad man?

10. SR - Negro teenage girl - Negro teenage boy - standing

    Here are two young people. One of them works at a gas station after school. Which one works at a gas station?

11. RA - Negro man - Caucasian man - standing

    Here are two men. One of them is a healthy man. He never has a cold or a high temperature. Which is the healthy man?

12. RA - Caucasian woman - Negro woman - sitting

    Here are two women. One of them is a sad woman. She has been left alone with no one to talk to. Which is the sad woman?

13. SR - Caucasian woman - Caucasian man - standing

    Here are two people. One of these people has baked two delicious apple pies. Which person baked the pies?

14. RA - Caucasian little boy - Negro little boy - standing

    Here are two little boys. One of them is a clean little boy. Whenever he washes his face he also washes behind his ears. Which is the clean little boy?

15. RA - Negro teenage girl - Caucasian teenage girl - sitting

    Here are two girls. One of them is a stupid girl. She doesn't even known how to spell her name. Which is the stupid girl?

16. SR - Negro man - Negro woman - standing

    Here are two people. When the car won't run, one of them is always able to fix it. Which person can fix the car?

17. RA - Caucasian man - Negro man - sitting

    Here are two men. One of them is a very selfish man. He does not care about anyone except himself. Which is the selfish man?

18. RA - Negro woman - Caucasian woman - walking

    Here are two women. People say that one of them is a wonderful woman. She can do almost anything. Which is the wonderful woman?

SERIES B

19. SR - Caucasian little girl - Caucasian little boy - standing

Here are two children one of them wants to grow up and be a cowboy. Which child wants to be a cowboy?

20. RA - Negro little girl - Caucasian little girl - sitting

Here are two little girls. Everyone says that one of them is very pretty. Which is the pretty girl?

21. RA - Caucasian little boy - Negro little boy - sitting

Here are two little boys. One of them is a very naughty little boy. He drew pictures on the walls of his house with his crayons and upset his mother. Which is the naughty little boy?

22. SR - Negro little boy - Negro little girl - standing

Here are two children. One of them likes to dress up in their mother's clothes and pretend that they are grown up. Which child likes to dress up in their mother's clothes?

23. RA - Caucasian teenage girl - Negro teenage girl - standing

Here are two girls. One of them is a happy girl? She smiles almost all of the time. Which one is the happy girl?

24. RA - Negro teenage boy - Caucasian teenage boy - sitting

Here are two boys. One of them is a cruel boy. When he comes home from school and his dog runs to meet him, he kicks his dog. Which is the cruel boy?

25. SR - Caucasian woman - Caucasian man - sitting

Here are two people. One of them likes to go shopping. When they go shopping they like to buy new dresses. Which person likes to buy new dresses?

26. RA - Caucasian man - Negro man - walking

Here are two men. One of them is a mean man. He throws rocks at dogs and cats when they come into his yard. Which is the mean man?

27. RA - Negro woman - Caucasian woman - standing

Here are two women. One of them is a good woman. She does things for her neighbors and her children. Which is the good woman?

28. SR - Negro man - Negro woman - sitting

Here are two people. One of them built a barn for their animals to live in. Which person built the barn?

29. RA - Negro woman - Caucasian woman - standing

    Here are two women. One of them is a helpful woman. Whenever someone is sick she goes to help them. Which is the helpful woman?

30. RA - Caucasian man - Negro man - sitting

    Here are two men. One of them is an unfriendly man. He will not speak to any of the children playing in his neighborhood. Which is the unfriendly man?

31. SR - Caucasian woman - Caucasian man - standing

    Here are two young people. One of them likes to play football every afternoon after school. Which one likes to play football?

32. RA - Caucasian teenage boy - Negro teenage boy - walking

    Here are two boys. One of them is a smart boy. When the TV set breaks, he can fix it all by himself. Which is the smart boy?

33. RA - Negro little girl - Caucasian little girl - walking

    Here are two little girls. One of them is a dirty little girl. People say she does not take a bath very often. Which is the dirty little girl?

34. SR - Negro teenage boy - Negro teenage girl - walking

    Here are two young people. One of them likes to wear lipstick. Which one likes to wear lipstick?

35. RA - Caucasian man - Negro man - walking

    Here are two men. One of these men is right. When someone asks him a question, he always knows the right answer. Which man is right?

36. RA - Negro woman - Caucasian woman - standing

    Here are two women. One of them is a sick woman. She has to stay in the house most of the time. Which is the sick woman?

APPENDIX B: Raw Data

Group CC: Caucasian Ss with Caucasian Es

*Indicates female Ss

S	CA	IQ	RA	SR	S	CA	IQ	RA	SR	S	CA	IQ	RA	SR	S	CA	IQ	RA	SR
1	40	119	21	12	17	62	106	23	12	33	67	108	19	12	*49	71	115	14	12
*2	45	103	12	10	18	62	119	24	12	34	67	127	16	11	50	71	97	19	12
*3	47	80	14	11	19	62	116	17	12	35	67	93	13	12	*51	72	106	18	12
4	47	107	21	9	20	64	108	23	12	36	68	121	21	12	*52	72	85	23	12
5	50	115	15	12	*21	64	101	22	12	*37	68	110	24	12	53	72	104	21	12
6	51	108	18	12	22	64	129	21	12	*38	68	104	23	12	54	72	121	17	12
7	54	117	21	12	23	64	108	21	12	*39	68	121	20	11	*55	72	101	15	12
8	54	121	17	12	*24	64	125	16	12	40	68	104	19	12	56	73	115	23	11
9	55	106	18	12	*25	64	101	22	12	*41	68	127	21	11	*57	73	93	21	12
*10	56	127	5	12	26	65	132	21	12	42	69	106	23	12	58	73	106	18	12
11	56	121	15	12	*27	65	112	14	10	*43	69	106	23	12	59	73	138	12	11
*12	57	97	24	12	*28	65	99	22	12	44	69	97	15	11	60	73	97	18	12
13	58	112	18	11	29	65	129	18	12	45	70	97	19	12	*61	73	72	19	11
14	59	119	20	12	*30	66	110	15	12	46	70	110	22	12	62	74	102	21	12
*15	60	114	17	12	31	66	108	22	12	*47	71	106	19	12	63	74	108	23	12
*16	61	125	16	12	32	66	119	18	12	48	71	106	17	12	*64	77	106	17	12

APPENDIX B: Raw Data (Continued)

Group CN: Caucasian Ss with Negro Es

*Indicates female Ss

S	CA	IQ	RA	SR	S	CA	IQ	RA	SR	S	CA	IQ	RA	SR	S	CA	IQ	RA	SR
*1	37	107	11	9	17	61	93	9	8	33	69	115	13	12	49	72	97	13	12
2	46	93	17	10	*18	63	125	18	12	34	69	134	21	12	50	72	93	13	12
*3	46	149	8	2	19	63	117	23	12	*35	69	97	22	12	51	73	95	24	12
*4	51	65	15	8	20	64	114	17	11	*36	70	72	19	11	*52	73	132	13	12
*5	52	121	18	10	*21	64	106	17	12	*37	70	80	20	12	53	73	119	16	12
*6	53	67	16	9	22	65	125	16	10	38	70	115	13	12	*54	74	112	15	12
7	53	129	10	12	23	66	87	3	12	*39	70	106	12	11	*55	74	91	22	12
8	54	150	15	9	24	66	102	20	12	*40	70	102	13	12	*56	74	95	14	12
9	55	131	20	12	25	66	30	14	7	*41	70	117	10	11	57	77	145	21	12
*10	55	113	12	11	*26	67	101	24	11	*42	70	93	14	12	*58	77	117	5	12
11	57	112	13	12	*27	67	112	22	12	*43	71	119	22	12	59	77	136	16	12
*12	58	90	12	11	*28	67	119	10	12	*44	71	104	9	12	60	77	125	22	12
*13	60	97	18	12	29	67	100	17	12	*45	71	127	19	12	61	79	112	21	12
14	60	55	13	10	*30	68	82	22	12	46	71	93	18	12	*62	79	108	12	12
15	60	110	13	12	*31	68	104	3	12	*47	72	123	4	12	63	79	99	11	12
16	61	116	17	12	32	69	115	19	12	*48	72	145	21	12	64	80	116	15	12

APPENDIX B: Raw Data (Continued)

Group NC: Negro Ss with Caucasian Es

* Indicates female Ss

S	CA	IQ	RA	SR	S	CA	IQ	RA	SR	S	CA	IQ	RA	SR	S	CA	IQ	RA	SR
*1	51	94	12	10	*17	61	67	16	12	*33	69	89	0	12	*49	74	82	13	12
*2	52	123	19	12	18	61	103	14	12	*34	69	93	23	10	50	74	106	21	12
3	52	77	14	9	*19	61	108	13	12	*35	69	93	21	12	*51	75	76	13	12
*4	54	98	14	7	*20	62	80	16	12	*36	69	87	2	12	52	77	93	11	12
*5	54	79	21	12	*21	62	97	4	12	37	70	67	14	11					
*6	54	88	17	10	*22	62	93	11	12	*38	71	67	23	11					
*7	54	119	16	11	23	62	78	19	9	39	71	93	9	12					
*8	55	81	17	11	24	63	84	14	11	*40	72	67	10	11					
9	56	96	15	12	*25	65	95	17	12	41	72	112	15	12					
*10	57	76	14	12	*26	65	53	13	9	42	72	85	12	12					
*11	58	60	10	9	*27	65	75	13	11	43	72	32	5	8					
*12	58	63	14	8	*28	66	87	2	12	44	72	104	15	12					
*13	59	106	17	11	29	67	74	18	11	*45	73	80	14	12					
*14	60	84	22	11	*30	68	89	16	12	46	73	87	23	12					
15	60	56	9	12	*31	68	72	16	11	*47	73	74	19	10					
16	60	82	22	12	*32	68	93	19	12	48	73	100	17	12					

APPENDIX B: Raw Data (Continued)

Group NN: Negro Ss with Negro Es

*Indicates females Ss

S	CA	IQ	RA	SR	S	CA	IQ	RA	SR	S	CA	IQ	RA	SR	S	CA	IQ	RA	SR
1	51	82	18	11	*17	61	145	14	12	*33	66	91	10	9	49	74	80	21	12
*2	52	101	21	8	*18	62	103	10	12	*34	66	82	15	10	50	74	93	12	11
3	53	51	10	7	19	62	88	20	10	*35	66	26	11	11	*51	75	89	22	11
*4	53	36	10	6	*20	62	73	18	7	36	66	57	14	8	*52	76	115	14	12
*5	55	71	14	8	*21	62	114	15	12	*37	66	74	23	9					
*6	56	92	13	10	22	63	99	17	12	38	67	67	17	12					
*7	58	51	13	5	23	63	69	17	11	*39	67	38	15	10					
8	58	62	15	10	24	63	76	16	12	*40	67	57	18	11					
*9	59	55	13	7	25	64	99	9	7	*41	67	93	13	10					
10	59	71	12	6	*26	64	60	13	10	42	68	110	15	11					
*11	60	99	13	11	*27	65	91	16	12	*43	68	43	18	10					
12	61	117	20	12	*28	65	80	22	11	*44	69	87	7	12					
*13	61	119	5	12	*29	65	86	9	12	*45	70	78	18	12					
14	61	90	11	9	30	65	110	19	11	*46	71	130	4	12					
*15	61	90	6	11	*31	65	73	17	12	47	72	91	24	11					
16	61	90	19	10	*32	66	97	1	12	*48	73	21	16	9					

APPENDIX C

PERCENTILE EQUIVALENTS OF RACIAL ATTITUDE SCORES IN THREE GROUPS OF PRESCHOOL CHILDREN

Note: The percentile equivalent of a given score indicates the per cent of cases scoring below that score

RA Score	Cauc Ss w/ Cauc Es		Cauc Ss w/ Negro Es		Negro Ss (Cauc and Negro Es)	
	Computed %ile	Smoothed %ile	Computed %ile	Smoothed %ile	Computed %ile	Smoothed %ile
24	95	91	97	93	99	96
23	83	85	95	90	95	94
22	75	78	86	87	91	92
21	58	69	80	84	87	89
20	55	58	75	78	85	84
19	45	48	70	73	79	79
18	33	38	64	66	73	73
17	24	27	56	59	65	66
16	19	19	50	52	57	59
15	11	12	44	46	49	52
14	6	8	39	43	38	43
13	5	5	25	31	27	35
12	2	3	19	26	23	29
11	2	1	16	21	19	24
10	2	1	11	16	14	18
9	2		8	12	10	13
8	2		6	8	10	10
7	2		6	5	9	7
6	2		6	4	8	5
5	0		5	3	6	3

APPENDIX C (Continued)

RA Score	Cauc Ss w/ Cauc Es		Cauc Ss w/ Negro Es		Negro Ss (Cauc and Negro Es)	
	Computed %ile	Smoothed %ile	Computed %ile	Smoothed %ile	Computed %ile	Smoothed %ile
4			3	2	4	2
3			0	1	4	1
2				1	2	1
1				1	1	
0					0	

APPENDIX D

SEX ROLE SCORES OF Ss IN THE 1970-71 STANDARDIZATION STUDY

Sex Role Score	Caucasian Ss (Cauc E) N = 64		Caucasian Ss (Negro Es N = 64		All Caucasian Ss N = 128		Negro Ss (Cauc E) N = 52		Negro Ss (Negro E) N = 52		All Negro Ss N = 104	
	f	%	f	%	f	%	f	%	f	%	f	%
12	52	81.3	46	71.9	98	76.6	30	57.7	17	32.7	47	45.2
11	9	14.1	7	10.9	16	12.5	11	21.2	12	23.1	23	22.1
10	2	3.1	4	6.3	6	4.7	4	7.7	9	17.3	13	12.5
9	1	1.5	3	4.7	4	3.1	4	7.7	4	7.7	8	7.7
8			2	3.1	2	1.6	2	3.9	3	5.8	5	4.8
7			1	1.6	1	.8	1	1.9	4	7.7	5	4.8
6									2	3.9	2	1.9
5									1	1.9	1	1.0
4												
3												
2			1	1.6	1	.8						
1												
0												